Title	Document Code No.
NETWORK SERVICE AND PERFORMANCE POLICY	ITG-P-07-02

Chief Information Officer Approval	Date	Effective Date.
	7/25/02	

1. PURPOSE:

The County Enterprise Network is increasingly relied upon to carry mission-critical and time-sensitive application traffic and must perform reliably, predictably, and securely. The **Network Service and Performance Policy** establishes the approved rules for ensuring the appropriate high level of service and performance for King County's Networks.

2. APPLICABILITY:

This policy applies to all King County Organizations and Workforce Members.

3. REFERENCES:

3.1. Countywide Information Technology Policy Governance Framework

3.2. Network Equipment Standard

3.3. Network Incident Reporting Guidelines

3.4. Network Infrastructure Equipment List

3.5. Network Service and Performance Standard

4. DEFINITIONS:

4.1. **Bandwidth:** The transmission capacity of an electronic pathway, such as a communications line. The term is most commonly used in reference to Internet traffic capacity.

4.2. **Bandwidth Allocation:** Bandwidth allocation is used in reference to the computing industry, in scenarios such as allocating bandwidth to a Web site running on one of the servers, or allocating bandwidth to a computer on the Network.

4.3. **County Enterprise Network:** The Network used to conduct county business that provides transport of data within and between county facilities and other agencies of county government. This definition also refers to the Network used to transport data between the county, other government agencies, and the Internet. It does not refer to Networks built for the sole purpose of meeting special operations needs of county business units, including process control and supervisory control Networks. Nor does it refer to the King County Institutional Network (I-Net), which is required to meet contractual obligations with I-Net customers and the local cable television utility.

4.4. **Incident:** Actual events that may cause damage to county information or systems.

4.5. **Internet Service Provider (ISP):** An organization that provides access to the Internet.

4.6. **Network:** A System that transmits any combination of voice, video, and/or data between users. The Network includes the Network operating System in the client and server machines, the cables connecting them and all supporting hardware in between, such as bridges, routers, and switches. In wireless Systems, antennas and towers are also part of the Network.

4.7. **Network Access Layer:** The Access layer is responsible for connecting devices to the Network. Although the topology of the access Network is relatively simple; it is here that the "policing" of customer connections, in terms of accounting, traffic rates, quality of service and routing policy occurs. Its defining characteristics generally revolve around either high port density or the ability to overcome physical "last mile" type challenges, like wireless 802.11, or remote access via modems or VPN.

4.8. **Network Core Layer:** The Core Layer is the "backbone". The Core Layer is responsible for the high-speed transfer of data. Its job is simply to move packets from point A to point B as fast as possible and with the least possible manipulation. It may also serve as the connection point for the regional distribution Networks and links to peer Networks. The defining characteristic is Redundancy and scalability. It is isolated from downstream change.

4.9. **Network Distribution Layer:** Distribution Layer design focuses on aggregating access devices with significant processing resources so that policies can be applied. The role of the regional Network is to route intra- and inter-regional traffic. The Distribution Layer is where policies are applied, securities in the form of access lists, quality of service, and CPU intensive routing decisions occur.

4.10. **Network Infrastructure Equipment:** Equipment that enables Network connections for a facility, group, or individual to other points on the County Enterprise Network. This definition includes LAN switches, routers, and WAPs serving each facility and those used to distribute data destined to other parts of the Network. It also includes appliances used to control Network traffic and secure the Network from unauthorized access. The appliances include, but are not limited to Network traffic shapers, Network firewalls, VPN concentrators and Network intrusion detection/prevention sensors.

4.11. **Organization:** Every county office, every officer, every institution, whether educational, correctional or other; and every department, division, board and commission.

4.12. **Reachability:** Having the capability of establishing communication with a device.

4.13. **Redundancy:** Refers to peripherals, computer systems, and Network devices that take on the processing or transmission load when other units fail.

4.14. **Service Desk:** This is the OIRM Incident call center. The primary purpose is to manage, coordinate and resolve Incidents as quickly as possible and to ensure that no request is lost, forgotten or ignored. The Service Desk also provides an interface for other activities such as customer Change requests, maintenance contracts, software licenses, Service Level Management, Configuration Management, Availability Management, Financial Management for IT Services and IT Service Continuity Management.

4.15. **Service Level Agreement (SLA):** A formal agreement that outlines the roles, responsibilities, procedures, and expectations shared between two (**2**) parties.

4.16. **System:** Software, hardware, and interface components that work together to perform a set of business functions.

4.17. **Throughput:** In communication Networks, throughput is the amount of digital data per time unit that is delivered to a certain terminal in a Network, from a Network node, or from one node to another, for example via a communication link. The throughput is usually measured in bits per second (bit/s or bps).

4.18. **User:** Any individual performing work for King County utilizing a personal computer, workstation or terminal, including but not limited to any employee, contractor, consultant, Vendor, Business Partner or other worker. Each term is used in the general sense and is not intended to imply or convey to an individual any employment status, rights, privileges, or benefits.

4.19. **Workforce Member:** Employees, volunteers, and other persons whose conduct, in the performance of work for King County, is under the direct control of King County, whether or not they are paid by King County. This includes full and part time elected or appointed officials, employees, affiliates, associates, students, volunteers, and staff from third party entities who provide services to King County.

5. **POLICIES:**

5.1. The Office of Information Resource Management (OIRM) Network, Systems, and Operations (NSO) is responsible for providing reliable Network Core, Distribution, and Access Layer services for all of King County government.

5.2. Workforce Members and Organizations shall not run any service that disrupts or interferes with OIRM NSO's centrally provided services.

5.3. The installation of unauthorized Network Infrastructure Equipment that includes, but is not limited to; hubs, routers, switches, IP phones, remote access devices, modems, wireless access points or any other devices that allow access to the King County Enterprise Network is prohibited.

5.4. All new Network Infrastructure Equipment shall meet the specifications found in the **Network Infrastructure Equipment List.**

5.5. All new Network Infrastructure Equipment shall be pre-approved by NSO and meet the specifications found in the **Network Equipment Standard.**

5.6. OIRM NSO shall ensure the County Enterprise Network is available for Workforce Member Reachability to the internal server infrastructure as stated in the **Network Service and Performance Standard.**

5.6.1. LAN Administrators shall be responsible for their Organization's IT environment, including but not limited to System services such as; document structures, printing, system hardware, and operating systems.

5.7. OIRM NSO shall provide for a scheduled availability of the King County Wide Area Network (KC WAN) Core and Distribution and accessibility to the ISP border as stated in the **Network Service and Performance Standard.**

5.7.1. Downtime, the total loss of connectivity on any Network Distribution switch caused by configuration or equipment failure, shall be meet the requirements as stated in the **Network Service and Performance Standard.**

5.7.2. Downtime caused by a carrier malfunction shall not be considered as part of the scheduled availability.

5.8. To provide Network service and support the OIRM Service Desk shall meet the availability requirements as stated in the **Network Service and Performance Standard** and the **Network Incident Reporting Guidelines.**

5.9. OIRM NSO shall provide Redundancy for the Network Core and Distribution Layers of the County Enterprise Network.

5.10. OIRM NSO reserves the right to take necessary steps to maintain security, service, and performance of the Network. OIRM NSO shall take action to contain devices that exhibit detrimental behaviors and allow normal traffic to continue. Some examples are listed below:

5.10.1. Imposing an exceptional load on a county service

5.10.2. Exhibiting a pattern of Network traffic that disrupts centrally provided services

5.10.3. Exhibiting a pattern of malicious Network traffic associated with unauthorized scanning or attack behaviors

5.11. OIRM NSO shall provide basic growth and capacity planning for the County Enterprise Network.

5.12. **Bandwidth Allocation:**

5.12.1. OIRM NSO shall control the Bandwidth Allocation for the County Enterprise Network.

5.12.2. OIRM NSO shall supply sufficient Bandwidth for acceptable performance of OIRM approved applications.

5.12.3. Guaranteed Bandwidth needs shall be addressed in Service Level Agreements (SLAs) between OIRM and its customers.

5.13. **Service Level Agreements:**

    5.13.1. OIRM may establish SLAs with its customers to outline in detail the expected levels of Network service, specific Bandwidth requirements, Redundancy, troubleshooting, and customer service to be provided.

    5.13.2. The time required for Workforce Members to receive a response after reporting an Incident to the OIRM Service Desk shall be determined by the SLAs.

6. EXCEPTIONS:

6.1. Exceptions to this policy may be granted by submitting a request in writing to the **Chief Information Officer** (CIO) as described in the **Countywide Information Technology Policy Governance Framework.**

6.2. In each case the agency shall include such items as:

    6.2.1. Description of the need for the exception

    6.2.2. Scope and extent of the exception

    6.2.3. Quantifiable risk assessment

    6.2.4. Safeguards to be implemented to mitigate quantified risks

    6.2.5. Specific timeline for the exception

    6.2.6. Organization within the agency requesting the exception

    6.2.7. Agency director approval of the exception request

6.3. Proposals for changes or request for exceptions to this policy shall be received from agencies and the **CIO** and shall be reviewed for completeness and business impacts by the **Network Policy and Standards Development Team.**

7. RESPONSIBILITIES:

7.1. The Chief Information Officer (CIO) is the approval authority for the **Network Service and Performance Policy.**

7.2. OIRM Network, Systems, and Operations is the steward of the Network infrastructure and is responsible for providing all transport services across the KC WAN. As such, OIRM will become the owners of the Network policies, standards, and guidelines.

7.3. OIRM is responsible for the operations and maintenance of all Network Infrastructure Equipment connected to the County Enterprise Network. OIRM is not responsible for Network Infrastructure Equipment that operates solely within a department **and** that OIRM has previously determined neither connects to, nor affects the operation of the County Enterprise Network.

7.4. OIRM is responsible for protecting the integrity of the County Enterprise Network. To meet this responsibility OIRM shall ensure compliance with the terms detailed in the **Network Service and Performance Policy.**

7.5. King County departments and agencies are responsible for informing their employees of this policy.